



Aerospace Education

Spring 2010

News

Inspiring Students To Excel

World's Strangest Airports

Important Events:

- National Robotics Week - April 10-18
- Earth Day - April 22
- Space Day - May 7

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Aerospace Education News

Aerospace Education News is the official aerospace education quarterly publication of the Civil Air Patrol at CAP National Headquarters, Maxwell Air Force Base, Ala.

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If you have news, events, or ideas we might consider for the newsletter, please submit them electronically to jstone@capnhq.gov.

Consider being an engineer tasked with building or updating an airport's runways to meet the needs of larger, more powerful airplanes...or being a pilot who has to land a large aircraft in less than ideal conditions. Both challenges are being accomplished around the world every day. The ideal location for an airport would need plenty of space, endless flat ground, favorable winds and great visibility. In the real world, these conditions are rarely, if ever met, and there are many airports that are facing multiple challenges.

One of these airports is Madeira International Airport in Maderia, Portugal. This airport's original runway was 5000 feet long (which limited large commercial-sized airplanes from landing). This caused concern over the import and tourism industries. The solution was to make the runway longer - 9000 feet! How did they do this? By building a massive girder bridge atop about 200 pillars. The bridge not only extended the runway but also won an award for design and construction that was both sensitive to the environment and aesthetically pleasing.

Madeira International Airport



Another airport with a unique challenge is found in the tiny British territory of Gibraltar. Gibraltar's busiest road cuts directly across the runway. This brought about a need for railroad-style

crossing gates that stop cars every time a plane lands or departs. Not only do the pilots have to be aware of air traffic but also ground traffic.



There are many other airports around the world with conditions far from ideal for landing. Problems such as water, beachfront, mountains, length of runway, and other considerations make them hazardous. Yet human beings seem to be able to conquer and adjust for current needs. To find out about other such airports, go to the Popular Mechanics website at <http://www.popularmechanics.com/tech/nology/transportation/4346192.html> and learn more.

(This article correlates to our Aerospace Education Spotlight person, Randy Carlson, and his work on satellite imaging and airports.)

Questions:

1. What would the conditions need to be for the ideal location for an airport?
2. How did Portugal solve the problem of the short runway at Madeira International Airport?
3. Look up Madeira, Portugal, on a map and tell where it is located.
4. Look up Gibraltar on a map and tell where it is located.
5. What problem did Gibraltar face with its airport?



Aerospace Education Member (AEM) Spotlight ...

Beppie Walerius, Ohio



Beppie Walerius started her interest in aviation at a young age. Her first heroes were the Mercury astronauts. Beppie's father, a former B-29 crewman during World War II, arranged for her first plane ride at age 10. The thrill of actually taking the stick and flying stuck with her the rest of her life!

The enthusiasm for flying grew stronger for Beppie as the years passed. She has used aviation and aerospace as a backdrop for the stan-

dards and benchmarks in her 5th grade science classroom in Van Buren, Ohio for a number of years. Beppie has seen unmotivated students come to life as they design, construct, and test model airplanes, kites, satellites and rockets.

The students in Beppie Walerius's classroom participate in the Southwest Airlines Adopt-a-Pilot program (<http://www.southwest.com/adoptapilot>) to give them first-hand experience learning about the training and routines of a pilot from a real pilot. The pilot assigned to her classroom visits and provides information and motivation to her students.

Beppie has had many professional development experiences to help her implement her program and teach her students. The experience of astronaut simulations and space studies at the basic and advanced Space Academy at the U.S. Space and Rocket Center in Huntsville, Alabama allowed her to share the enthusiasm and knowledge she experienced with her students. Beppie is also the Teacher Liaison for the U.S. Space Foundation. One of

Beppie's many honors included being named the 2007 Air Force Association Ohio Teacher of the Year for her work in aerospace education.

Another resource that Beppie has not only used but contributed to (as a teacher editor) is the CAP ACE (Aerospace Connections in Education) Program. She uses it to motivate and teach her students about the wonders and science behind aerospace. Beppie was introduced to the CAP educational programs from a SOAR (Science in Ohio through Aerospace Education) program at the U.S. Air Force Museum. The CAP materials and the ACE curriculum are some of her most valuable resources. They provide her with easy, exciting ways to implement activities that capture the imagination of her students.

We thank Beppie Walerius for her commitment to aviation and space education and her continued support and dedication to CAP. She is passionate about education and ensuring that her students have the tools necessary to carry them forward in school and life.



Beppie Walerius's students with pop rockets. Notice the focus on eye safety!

"CAP materials and ACE curriculum are some of my most valuable resources. They provide easy, exciting ways to implement activities that capture the imaginations of my students."

---Beppie Walerius



Students preparing to launch their ACE flying disks after the aerospace-related lesson.



Aerospace Education Officer (AEO) Spotlight..... Lt Col Randall Carlson, Colorado Wing DAE*

Lt Col Carlson was born in Los Angeles, California, and enlisted in the Air Force on 20 June 1966. After serving in Vietnam, he was honorably discharged in 1970 and joined the Air Force Reserve in 1972. From then until 4 November 2006, he was involved, on and off, with many taskings for the Reserves. He retired with over 40 years active and reserve service.

Lt Col Carlson's education back-

ground consists of a Bachelor of Science Degree from California State Polytechnic University and graduate school at the same university. His military schooling includes Air Weapons Controller Technician School, Academy of Military Science, Air Weapons Controller School, Logistics/Mobility Officer Course, and Air Transportation Officer Course.

On 18 May 2006, Lt Col Carlson joined the Civil Air Patrol, Broomfield Composite Squadron, in the Colorado Wing. One of the reasons he joined was because of his step-grandson. He was assigned as the Aerospace Education Officer, Professional Development Officer, and Historian of the unit. He earned his Level II certification, Yeager AE award, and a commendation medal within 10 months of joining CAP as a volunteer. Lt Col Carlson went on to achieve his Level III rating, and his Master AE rating and A. Scott Crossfield. He is currently working toward completing Level IV and V in CAP Professional Development. In



2008, Lt Col Carlson became the commander of his unit.

The honors received by Lt Col Carlson and his unit include the CO Wing Squadron of Distinction/Merit for 2009 for meeting CAP objectives and goals for the cadets in his unit. He is currently the commander of his unit, as well as the CO Wing Director of Aerospace Education. Lt Col Carlson is also working on a project with NHQ to put satellite imagery, viewing software, and both teacher and student worksheets in CAP units and schools across America.

Lt Col Carlson has a passion to teach, and his skill, creativity and knowledge help him thrive in the world of aerospace education. He is always giving of his talents, and for that CAP is extremely grateful and fortunate.

*Note: As of the printing of this newsletter, Lt Col Carlson was relocating to California. We wish him the same success he had in Colorado. Thanks, Lt Col Carlson!



Lt Col Carlson teaches cadets using his satellite imaging curriculum.

When talking about his satellite imagery curriculum, Lt Col Carlson says: "I try to show major places in American history, as well as airports and other interesting places, so students can explore rich geographical content."



K-6 Aerospace Connections in Education (ACE) Program - Onward and Upward!

As teachers and students see summer break fast approaching, it's time for ACE teachers to start thinking about ACE completion for the 2009-2010 school year. First of all, please do not neglect submitting award nominations. Award descriptions and nomination forms are located in your ACE curriculum binder, as well as on the ACE website that can be found at www.capmembers.com/aceteachers. The deadline to submit ACE award nominations is April 25.

process, have the six lessons you wish to evaluate already identified prior to beginning the online ACE completion form. You will be asked to rate any six lessons that you taught or supervised. The ACE Completion link will be available on eServices from April 6 to June 15. Make sure you complete this task at least 3 weeks prior to your need for student certificates!!!

As for participation for next year, all current ACE teachers will have the option to pre-register their class for the 2010-2011 school year! A question on the ACE completion form will ask you if you want to participate again next year. If you checked "yes," you will have access to a 2010-2011 registration link after you submit your online ACE completion form. Please use your best estimates regarding student class size and T-shirt sizes. You will be able to update your pre-registration information in August and September.

If you are an elementary teacher in grades K - 6, and you



Ken Blackburn (Guinness World Book of Records for time aloft for paper airplanes) speaks at Kenwood Elementary (AL) ACE lift-off.

have not participated in our ACE Program, please visit our website at www.capmembers.com/ae, and click "ACE" to learn more about this engaging, exciting, inspiring, and motivational aerospace education program that CAP offers. After learning about the program, if it is a program in which you wish to participate next year, please plan on registering your class in August or September. If you have any questions, please send Angie St. John an email at ace@capnhq.gov. The



Boaz, AL students display their ACE certificates.

Regarding submission of an ACE Program completion form, we are excited to announce that this will be done online this year, saving paper, trips to a fax machine or scanner, and/or stamps! To access the ACE Completion form online, go to eServices at www.capnhq.gov. (If you have never created an eServices account, you will have to do that first. Simply click "First time eServices users click here to activate your account," which is located directly below the log in boxes.) Once you click the ACE Completion form, simply answer the questions, click "submit" at the end, and you are finished! To expedite the



Cappy (ACE mascot) greets students at Hayneville Elementary in Montgomery, AL.

program achieves maximum potential when the entire school becomes an "ACE" school with all of its teachers being ACE teachers! The ACE Program helps elementary teachers teach regular subjects in extraordinarily fun ways!



CURRICULUM CORNER.....K-4

AIRPORT TERMS.....

(Source: NASA's "Johnny's Airport Adventure" - complete teacher guide found at:<http://www.ueet.nasa.gov/StudentSite/lessonplans.html>)

Objective: Students will demonstrate their knowledge of airport terminology by correctly labeling the parts of an airport.

National Science Standards:

Content Standard E: Science and Technology

- Abilities of technological design
- Understanding about science and technology

Content Standard G: History and Nature of Science

- Science as a human endeavor
- Unifying Concepts and Processes
- Evidence, models, and explanation

Grade Level(s): K-5

Background Information:

Airports help travelers every day. The **terminals** (station where transport vehicles load or unload passengers or goods) are lined by gates where you get on and off of the airplanes. **Runways** (a strip of level, usually paved, ground on which aircraft take off and land) are amazing...a typical one is about 2 miles long, as wide as a 16-lane highway and about 3 feet thick! Engineers designing runways have to consider the number of wheels an airplane has and how far apart they are, the size of the tires, the weight of the airplane, and how long the runway needs to be for an airplane to take off and land. **Taxiways** (a paved surface used by planes going to and from the runway at an airport) help airplanes get from the gate to a main runway for take-off and from a main runway to the gate after landing. The airplanes sit on the **tarmac** (a paved road or surface where an aircraft parks or maneuvers) while the passengers load and unload or while the airplane is being serviced. Air traffic controllers work in the **control tower** (a tower with an elevated workspace enclosed in

glass for the visual observation of aircraft around an airport). These workers handle all take off, landing, and ground traffic at the airport. Some airports have **helipads** (a place for helicopters to land and take off). These can be used to get helicopters in and out quickly for such reasons as emergency medical transport.

Materials:

- Label the parts of an airport worksheet
- Scissors
- Glue

Procedure:

1. Read and discuss the background information with the students. Ask them to relate any experiences they have had at an airport. Show any pictures you have of the parts of the airport.

2. Hand out the worksheet and the scissors and glue to the students.

3. Have students cut out the terms on the bottom of the worksheet and glue them to the correct box on the picture of the airport.

4. Check students work.

Extra activities:

1. Students may role play the different careers associated with the airport such as ticket agent, baggage handler, air traffic controller, etc.

2. Older students can make up a story about going to the airport. They may also want to do a word search or word puzzle of airport terms.

3. Take a field trip to a local airport.

4..Have students interview someone who works at an airport.

Terminal



Runway



Taxiway



Tarmac



Control Tower



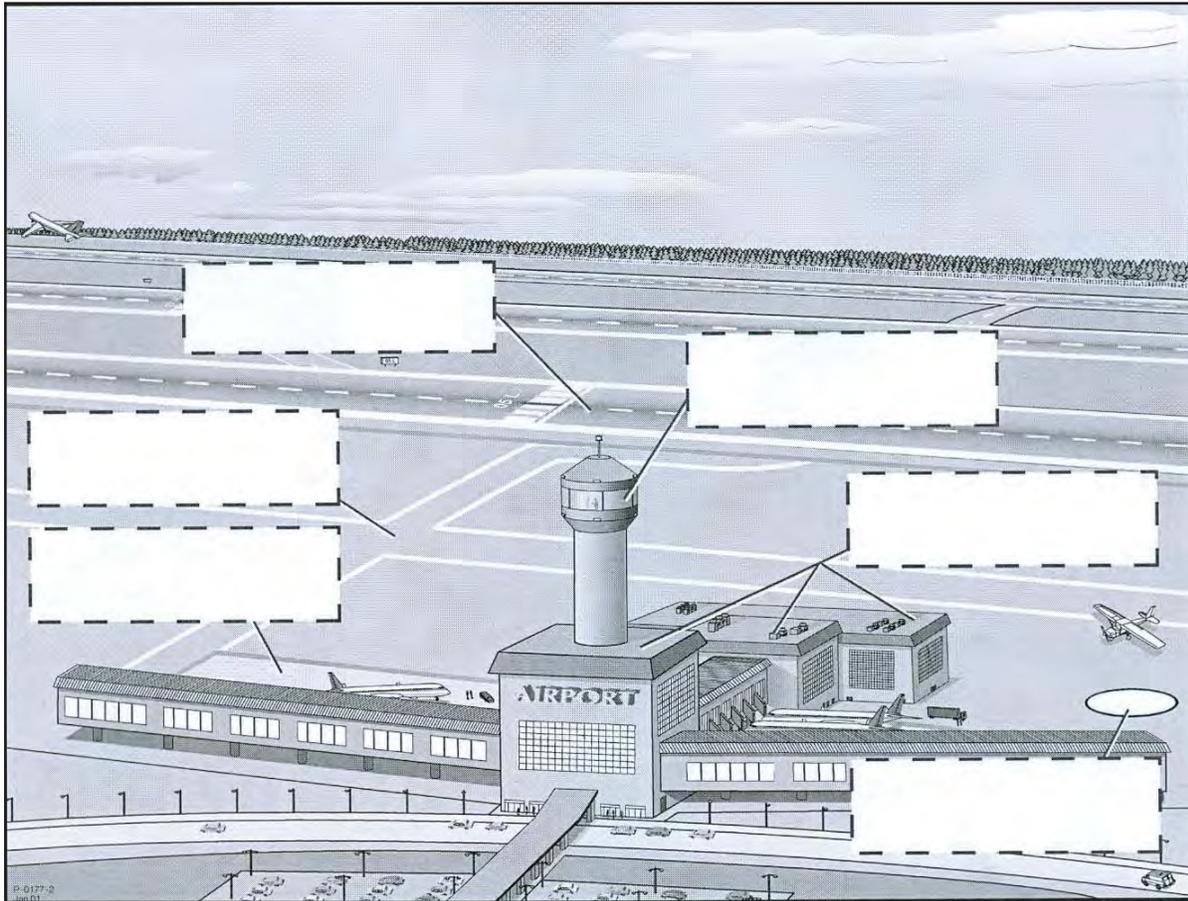
Helipad





Student Labeling Worksheet -

Name _____



Terminal

Runway

Taxiway

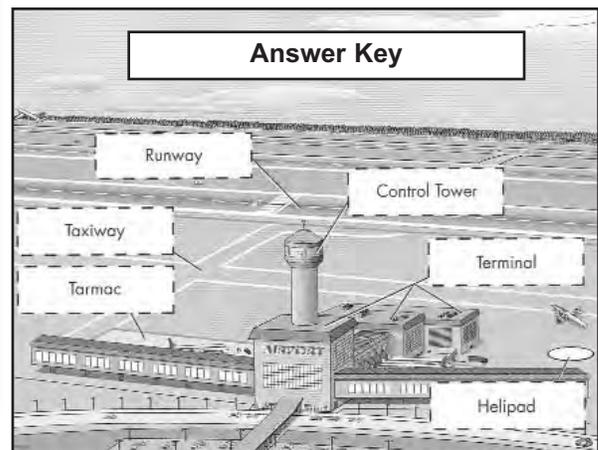
Control Tower

Tarmac

Helipad



Satellite view of airport in Cleveland, Ohio





CURRICULUM CORNER (Grades 5-12).....

Mapping From Memory...

(FAA Gate to Gate curriculum - Air Traffic Controllers - complete guide found at: <http://www.natca.org/about/gatetogate.msp>)

Objective: Students will learn the importance of memory to air traffic controllers. Students will learn about Air Traffic Controller as a career choice.

National Science Standards:

- Content Standard E: Science and Technology
 - Understanding about science and technology
- Content Standard F: Science in Personal and Social Perspectives
 - Science and technology in local, national, and global challenges
- Content Standard G: History and Nature of Science
 - Science as a human endeavor
- Unifying Concepts and Processes
 - Evidence, models, and explanation

Grade Level: 6-12

Background Information:

Air Traffic Controllers must have an excellent memory and be able to picture maps and drawings three dimensionally. Before one can begin air traffic control training, one must be able to memorize and draw from memory maps displaying air traffic control routes, aeronautical charts and airport layout maps. Memory is a critical factor in determining the effectiveness of the air traffic controller's mental 'picture' or situation

awareness.

Materials:

- Mapping from Memory airport layout map
- Mapping from Memory fill-in airport layout map
- Mapping from Memory score sheet
- Pencil

Procedure:

1. Discuss the qualifications for Air Traffic Controllers to do their jobs. (Good memory and listening skills as well as the ability to work under stressful conditions are attributes for someone seeking this position).
2. Have students look at the airport layout map. Tell students that a typical airport will have the following components:
 - One or more runways
 - Taxiways that aircraft use to get to the runways
 - Ramp area for aircraft parking
 - Terminal building where passengers and luggage move in and out
 - Air Traffic Control Tower (ATCT)
3. Have students study the airport layout map for a full two minutes. Have them note the placement of the 5 main components and note the numeric designations of each runway and taxiway.

4. Take the map up and give the students a blank airport layout map with no labels.

5. Give the students 5 minutes to complete the blank map with the following:
 - Mark each runway with its proper numeric designation
 - Mark each taxiway with its proper numeric designation
 - Label the control tower
 - Label the aircraft ramp area
 - Label the terminal



Assesment:

Have students compare their completed maps with the key and rating score sheet.

Additional Activities:

1. A good project for this activity would be for groups of students to make a model of a local airport and explain where the 5 main components are located.
2. Do a powerpoint presentation explaining what is required to become an air traffic controller.
3. Another resource for connecting math to this lesson is NASA's Smart Skies website: <http://smarts skies.nasa.gov/>

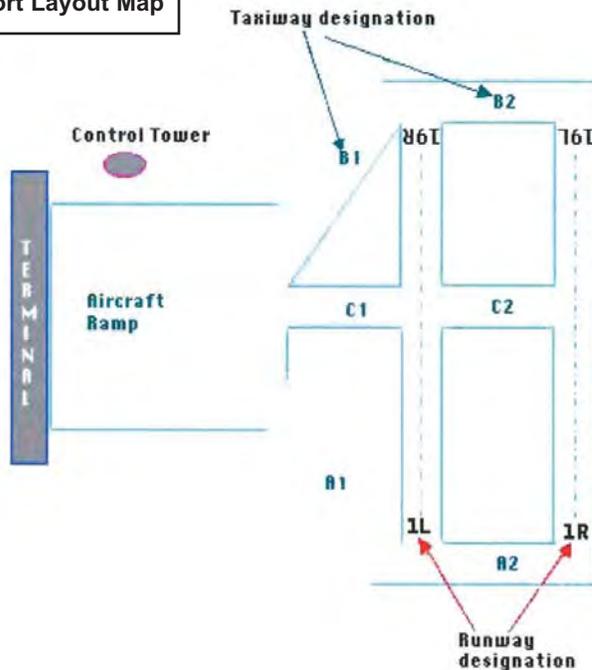


Military air traffic controller



Teacher Information and Student Activity Sheet

Airport Layout Map



Scoring:

All in all, there are 4 runways with the designations 1L, 1R, 19L, 19R and 6 taxiways with the designations A1, A2, B1, B2, C1, C2. Score one point for each runway you drew and one point for each taxiway you correctly marked. That would be 8 points altogether. Score one point for each taxiway you drew and one point for each taxiway you marked correctly. That would be 12 points in all for taxiways. Score 1 point each for correctly identifying the aircraft ramp, the control tower and the terminal. That would be 3 points for those areas. Your highest total score could be 23 if you correctly marked and labeled everything! Check your recall in the box below. Insert your score on the activity sheet.

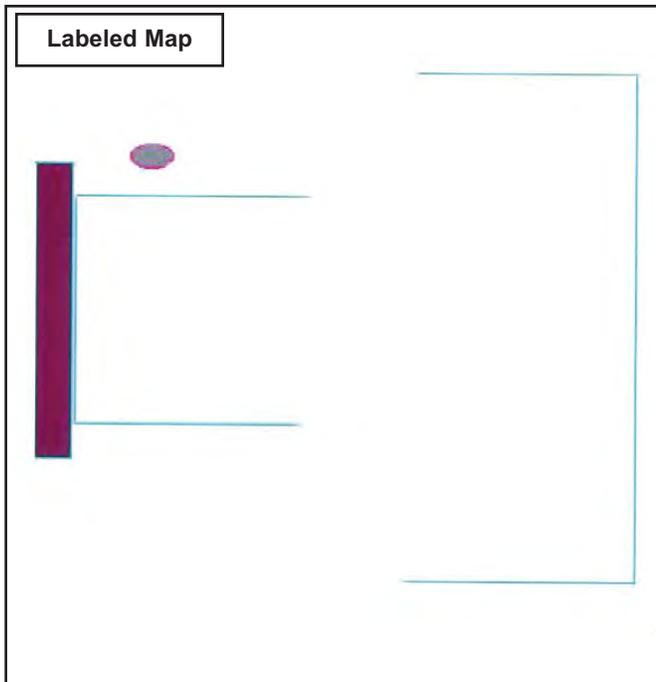
Recall Score Box

23	You have a memory like a herd of elephants!			
20 - 22				
17 - 19				
14 - 16				
13 and below				

Name _____

Memory Score _____

Labeled Map



Directions: After looking at the airport layout map for two full minutes, complete the outline map with the correct labels and drawings for the 5 main components of a typical airport. Take 5 minutes to do this and then compare your labeled map to the original map and score your results.





Aerospace Education Notes.....

Monthly AE E-News Online....

Have you seen our CAP AE E-News that comes online the first of each month? If not, go to www.capmembers.com/ae and click on the e-news link. You can choose to be notified when this page is updated by signing up for the free e-mail notification service on this page. The monthly e-news contains items of interest

for Aerospace Education Officers in CAP and our Aerospace Education Members who are teachers. News about contests, workshops and other professional development opportunities offered by different

aerospace-related organizations, such as CAP, are included in this monthly update. Don't miss out on "getting in the know" concerning aviation and space topics related to education.



NASA INSPIRE Project Accepting Applications.....

NASA's INSPIRE (Interdisciplinary National Science Program Incorporating Research and Education Experience) encourages the next generation of explorers from the 9th through 12th-grade to pursue an education and career in the sciences, technology, engineering, and mathematics (STEM) fields.

INSPIRE students:

- Have exclusive access to the INSPIRE Online Learning Community.
- Compete for unique summer experience at a NASA facility.
- Learn about STEM education and careers.

The INSPIRE application site will be live beginning on May 3 and will be open until June 30. For more information on this project, go to www.nasa.gov/education/INSPIRE.



Satellite Tool Kit (STK) Users' Conference Tour (FREE)...

AGI, makers of STK, is conducting a spring and summer tour to provide STK training in 13 locations. This one day training is FREE and well worth your time and effort to attend. You will come away with a much better understanding of how to use the STK software. Go to <http://uc.agi.com> to learn more about this tour and find a site near you.

AEX Program...

Remember that the AEX Award Program completion reports are now done online through e-services. If you are an AEM and preparing to complete the program to receive your plaque and certificates please go to www.capnhq.gov to complete your report. If you have any questions or concerns, please contact Debbie Dahl at ddahl@capnhq.gov, and she will be happy to assist you.

FREE TOP Flights for CAP Educator Members!

One of the many benefits provided for CAP educator members are the Teacher Orientation Program (TOP) Flights. To receive your TOP Flight, email Judy Stone at jstone@capnhq.gov and she will put you in touch with the person responsible for the flights in your state. Get your summer professional development soaring with your TOP Flight!

Space Day 2010...

This year's official Space Day celebration takes place on May 7. And the fun continues on May 8, 2010, with the Space Day Family Day event taking place in Washington, D.C. For more on Space Day and events in your area, go to <http://www.spaceday.org/index.php/View-Events.html>.



Students from Corley, Texas with AEX Awards

Answers to front page story:

1. The ideal location for an airport would need plenty of space, endless flat ground, favorable winds and great visibility.
2. The problem in Maderia International Airport was solved by building a massive girder bridge atop about 200 pillars to extend the runway.
3. The Madeira chain of islands is located in the Atlantic Ocean, southwest of continental Portugal.
4. Gibraltar is a British overseas territory located on the southern end of the Iberian Peninsula and Europe at the entrance of the Mediterranean overlooking the Strait of Gibraltar.
5. Gibraltar's busiest road cuts directly across the runway.



Thank You



Air Force Association!

Air Force Association Partnership

The Air Force Association (AFA) continues to recognize the significant aerospace contributions of CAP to our nation by providing \$250 grants to CAP units and teachers to assist them in perpetuating the AE mission in their units and classrooms.

December 2009 Unit Grant Recipients:

- AL - Boaz Sq
- AL- Maxwell Sq
- CA- San Diego Sq
- CA- Tehachapi Sq
- CO- Group One
- CT- Thames River Sq
- GA- Central Fellowship Christian Academy Sq
- IL- Lt Col Julius Jackson Sq
- KS- New Century Sq
- MA- Lt Col Frank Pocher Sq
- MD- Osprey Sq

- MN- 119 ANG Sq
- MN- Mankato Sq
- MT- Malmstrom Sq
- OK- Edmond Sq
- PA- Willow Grove JRB Sq
- TX- Marauder Squadron
- VT- Rutland Sq
- WI- Milwaukee Sq

March 2010 Educator Grant Recipients:

- Sandy Armstrong- Dothan, AL
 - Joseph Dolan- Dubuque, IA
 - Col James Dowis, AFJROTC- Greenville, SC
 - Pam Fossum- Provo, UT
 - Brack Gillespie- Green Bay, WI
 - Lynn Griggs/Susanne Tomaschko - Ft Walton, FL
 - Deborah Hendrix- Montgomery, AL
 - Janie Hill-Hot Springs, AR
 - Rebecca Hill- Maxwell AFB, AL
 - Diane Keeton- Clinton, OK
 - Terri Lake- Tolleson, AZ
 - Daniella Leach- N Lakewood, WA
 - Gyndolyn Lomax- Hampton, VA
 - Carrie Murray- W Chester, OH
 - Kurt Olson- Sheridan, IN
 - Debra Popp- Grove, OK
 - Rebecca Reyer- Baltic, CT
 - Mary Schillereff- Asheville, NC
 - Stephen Szydlo- Miami, FL
 - Janice Wright- Boaz, AL
 - Susan LaGrippe, W Dundee, IL
- After-action grant reports from units and teachers illustrate a myriad of uses for the grants that perpetuate the importance of aerospace in our units and

classrooms and throughout our world. Grant recipients have purchased flight simulators, radio-controlled airplanes, rocketry supplies, and materials to build hover craft. Groups have taken field trips to a variety of museums and airfields to explore aerospace history and careers. Teachers are starting after-school aerospace clubs. Groups are participating in NASA Design Challenges, Legos Robotics programs, and STEM Field Days.

There are four annual grant cycles with the next "unit" grant cycle ending June 30, and the next "teacher" cycle ending September 30. To find out more about AFA's contributions to CAP and to complete a grant application, go to the AFA link at www.capmembers.com/ae.



The AFA grant will allow Gardner Magnet School Science Club to purchase a telescope and laser pointer for astronomy sessions with the community.



AFA Grant allowed 22 CAP senior and cadet members in Monroe, MI to work with about 100 Monroe District Boy Scouts of America to build and launch aircraft and rockets for an educational aerospace day!

AFA's CyberPatriot Program

55 CAP cadet teams participated with AFJROTC teams in a nationwide AFA initiative to promote cyber defense for American security. This is an online cyber defense competition program whereby cadets defend a computer network against a simulated attack. The program culminated at the AFA Air Warfare Symposium in February in Orlando with 8 final competing teams from CAP and

JROTC. CAP Burlington Comp Squadron, from Burlington, NC placed second and CAP Beach Cities Cadet Squadron 107, from Torrance, CA placed third and was the Top Scorer in the national competition. We look forward to next year's competition where we hope CAP becomes the national champion! For teachers in high schools across the nation- the competition will be open to any high school for the 2010 school year. For more information, go to: <http://www.highschoolcdc.com/>.



CAP's National Commander, Maj Gen Amy Courter, encourages CAP cadets in CyberPatriot II Competition in Orlando, Florida.



From The Deputy Director's Desk.....Dr. Jeff Montgomery



NEW AE Advisor... Lt Col Mike McArdle

Lt Col Mike McArdle has been named by our National Commander Maj Gen Amy Courter as the new National Aerospace Education Advisor. Lt Col McArdle has been a member of CAP for over 20 years. He began as an Aerospace Education Member (AEM), but he soon joined as a regular senior member. As a senior member, Mike became a squadron AEO and spent several years at that position before accepting the role as the Wisconsin Wing Director of Aerospace Education (DAE). Mike's claim to fame was that his wing was the first wing to receive an Outstanding rating in AE on a Wing Compliance Inspection. Later, he was able to share his insights with other



DAEs, several of whom then also received Outstanding ratings. Mike went on to lead Wisconsin to becoming one of the very best AE wings in CAP. After a few years as the DAE, Mike was selected as the Great Lakes Region Deputy Chief of Staff for AE (DCS/AE). He held that position until he was selected as the National AE Advisor.

Mike is a retired school teacher. As a teacher, he infused aviation and aerospace into his social studies classes and even developed a school board policy for teachers to be able to fly students. Mike also taught an aviation program for 16 years in two separate high schools. Lt Col McArdle is also a retired Colonel in the US Army Reserves. Col McArdle spent 23 of his 30 years in military education. He served as Commandant of the Fourth Army Intelligence School and later as the Commandant of the Fourth Army Training Center, where he was responsible for the education of over 7,000 soldiers.

Mike is a commercially certificated pilot with instrument ratings for single engine land and sea. He is also a bona fide hot-air balloon enthusiast and has packed his

balloon, Flower Power, and attended rallies in several states. And, on many occasions, Mike has also taken CAP members on balloon flights.

Mike has also been a lead instructor at the National AEO School in Pensacola. In 2002, Mike helped put together the very first agenda and has been involved ever since. Mike holds a Master Rating in AE. He was also selected as a Frank G. Brewer Award winner, in the Lifetime Achievement category, for his numerous accomplishments and lifelong devotion to aerospace education. Additionally, Mike was inducted into the National Conference of Aviation and Space Education's (NCASE) Crown Circle for his extraordinary leadership and accomplishments in AE.

I have worked closely with Mike for more than ten years on a myriad of projects and can attest to his hard work, dedication, and love of CAP and aerospace education. We are very pleased and excited to have him as the AE Advisor. He will do great things for AE, and we look forward to continuing our partnership with him.

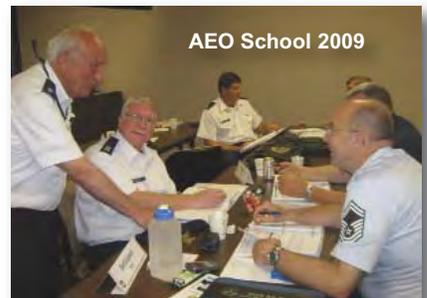
AE Publications

As I hope you know, CAPR 280-2 was updated last year, and CAPP 15 was updated about three months ago. Now, I'm pleased to report that the CAPP 215, the Aerospace Education Officer Specialty Track revision, has been completed. It can be found at www.capmembers.com/forms_publications_regulations/pamphlets.cfm. This revision was a much needed update and hopefully, you will find it easier to use than the last version. There is one major change that I need to mention. The time requirements to reach Technician, Senior and Master ratings have been changed. The requirements are now; 6 months to Technician, 6 months to Senior, and 12 months to

Master. These changes put AE much more in line with the other CAP specialty tracks. Anyone currently participating in the 215 Specialty Track can continue to use the 4 month time requirement for each rating. However, for members becoming an AEO after May 1st, or for anyone beginning a higher rating, they must use the new time requirements. Within the next couple of months, we will send copies of CAPP 15 and CAPP 215 to all the CAP units. The 215 Specialty Track tests have been updated, as well. They can be found at www.capmembers.com. Go to CAP University; click on Online Courses and Exams and you'll find the 215 tests.

Aerospace Education Officer Schools 2010

This year there will be 5 AEO Schools. All of them will be occurring between June - August 2010. Go to www.capmembers.com/ae and click on "announcements" to find out more information about the schools.





REGION TO REGION

For information on other pertinent dates for CAP Members and Educators, go to our calendar at www.capmembers.com/ae.

NORTHEAST REGION

May 3-7
"Space Day Maine" will be observed with nine schools participating. CAP will be involved along with other dignitaries from the area. To find out more, contact **Sharon Eggleston (CAP member and Northeast Regional Coordinator of Space Day) - bseggs@gwi.net**

June 8-12
LEGO Engineering Symposium 2010 will be held at Tufts University in Medford, Massachusetts.
<http://www.legoengineering.com/>

July 22-25
The Northeast Region Aerospace Officer's School will be held at Otis ANG in Massachusetts.
<http://www.ner.cap.gov/ae/>

MIDDLE EAST REGION

June 17-19
Middle East Region Aerospace Education Officer's School will be held at the Glenn L. Martin Learning Center in Baltimore, Maryland.
For questions, contact Maj Bob Beichner at rbeichner@mer.cap.gov.

GREAT LAKES REGION

May 1
Airport Daze will be held at the Heritage in Flight Museum in Lincoln, Illinois. This is the 60th anniversary of the Lincoln Airport and the 30th Anniversary of the Heritage in Flight Museum.
http://www.heritageinflight.org/Airport_Daze.htm

June 11-13
14th Annual Indianapolis Air Show will be held at Mt. Comfort Airport in Indianapolis, Indiana. CAP will be participating.
<http://www.indysirshow.com>

SOUTHEAST REGION

April 13-18
36th Annual Sun 'n Fun Fly-In and Expo will be held at Lakeland Linder Regional Airport in Lakeland, Florida, with an accompanying teacher work-

shop. Contact Barbara Walters-Phillips at flypatbarb@aol.com for information about the workshop.
<http://www.sun-n-fun.org/>

June 18-20
Gulf Coast Hot Air Balloon Festival will be held on the Festival Grounds in Foley, Alabama.
<http://www.hotairballoon.com/Gulf-Coast-Hot-Air-Balloon-Festival/>

June 22-25
Air Race Classic-Transcontinental Air Racing for women will hold its event to encourage and educate future women pilots as well as educate the public on women's roles in aviation. (Flying from Ft. Myers, Florida to Frederick Maryland)
http://www.ninetynines.org/index.cfm/air_race_classic.htm

June 23-26
CAP National Aerospace Education Officer's School will be held at Pensacola Naval Air Station in Pensacola, Florida.
http://www.capmembers.com/aerosp ace_education/internal_specific/aeo _resources/aeo_school.cfm

NORTH CENTRAL REGION

June 9-13
Space Education Initiatives and the Iowa Space Grant Consortium are coordinating a behind the scenes tour of Kennedy Space Center. This tour is for educators.
Contact Jason Marcks at jmarcks@spaceed.org

SOUTHWEST REGION

April 23-24
Boosting Engineering Science and Technology (BEST) National Robotics Championship will be held at the Dallas Convention Center in Dallas, Texas.
<http://best.eng.auburn.edu/>

April 24
Air and Rocket Racing Show will be hosted by Tulsa Air and Space Museum and Planetarium in Tulsa, Oklahoma.
<http://www.tulsaairshow.com/>

July 11-15
National Energy Conference for Educators will be held in Dallas, Texas.
<http://www.need.org/summertraining.php>

ROCKY MOUNTAIN REGION

June 14-18
Space Foundation Discovery Institute offers educators 2 courses: Pre-K Early Childhood - "Space Exploration and Rocketry" and Elementary, Middle and High School - "The Future of Human Space Exploration." Scholarship opportunities are available. These and other space-related courses will be held at the Space Foundation Discovery Institute in Colorado Springs, Colorado.
<http://spacefoundation.org/educator/events>

July 31 - August 4
The Astronomical Society of the Pacific will hold the 122nd Annual Meeting at the University of Colorado at Boulder, Colorado.
<http://www.astro.society.org/events.html>

PACIFIC REGION

May 1-2
California's Climate Educator Conference will be held at NASA's Jet Propulsion Laboratory near Pasadena, California. This conference is geared toward all educators (including museum staff) and students (high school and above) interested in earth and space science and exploration. **Registration deadline: April 26!!**
<http://www.jpl.nasa.gov/education/index.cfm?page=130>

May 15-16
Planes of Fame Air Show 2010 will be held at Chino Airport in Chino, California.
<http://www.planesoffame.org/>

July 7-10
The Pacific Region Aerospace Education Officer's School will be held at the Kilauea Military Camp located near Volcano National Park in Hawaii.
Questions regarding the AEO School - Virginia Nelson at vmnelson@juno.com